

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHRISTOPHER F. LYONS,
GARY T. SPINILLO,
and ROBERT L. WOOD

Appeal No. 94-3399
Application 07/871,374¹

ON BRIEF

Before KIMLIN, PAK and WARREN, Administrative Patent Judges.
PAK, Administrative Patent Judge.

DECISION ON APPEAL

Appellants (Lyons et al.) appeal from the final rejection of claims 1 through 12. The remaining claims, claims 13 through 24, have been withdrawn from consideration by the

¹ Application for patent filed April 20, 1992.

examiner under 37 CFR § 1.142(b) as being drawn to a non-elected invention.

Claims 1 and 2 are representative of the subject matter on appeal and read as follows:

1. A method of reducing linewidth variations in the patterning of a photoresist layer having a non-uniform thickness in a photolithographic process using light from a partially coherent lens, said method comprising: overcoating a first layer comprising a photoresist composition with a second layer comprising a non-reactive, transparent, water soluble material with a refractive index within $\pm 15\%$ of the refractive index of the photoresist, the second, overcoating, layer of water soluble material being of sufficient thickness to cause about a one wave length phase delay to accumulate in that portion of the exposing light having an incident angle to the second layer upper surface equal to about the arccos of the numerical lens aperture value, said phase delay being in comparison to that portion of the exposing light having an incident angle normal to the second layer upper surface, wherein said phase delay accumulates upon traversing an optical path from the photoresist layer upper surface to the photoresist layer lower surface and reflecting back to the photoresist layer upper surface.

2. The method of claim 1 where the thickness of said second, overcoating, layer of water soluble material is define by the formula

$$T2 = L/2N\{\cos I'N / (1 - \cos I)\} - T1$$

where T2 is the thickness of the overcoating water soluble material layer, T1 is the thickness of the photoresist layer, L is the wavelength of the exposing light, N is the numerical lens aperture value, I is equal to arcsin (N), and I' is equal to arcsin (I / N).

The appealed claims stand rejected as follows:

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(1) Claims 1 through 12 under 35 U.S.C. § 112, first paragraph, as lacking descriptive support for the invention as is now claimed in the original disclosure; and

(2) Claims 1 through 12 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which applicants regard as their invention.

OPINION

Rather than reiterate the conflicting viewpoints advanced by the examiner and appellants in support of their respective positions, reference is made to appellants' brief and to the examiner's answer for the full exposition thereof. For the reasons set forth below, we affirm the rejection of claim 2 under 35 U.S.C. § 112, first paragraph, but reverse the remaining rejections of the appealed claims under 35 U.S.C. § 112, first and second paragraphs.

REJECTION UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

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The issue of whether an original disclosure adequately describes the subject matter later claimed is a question of fact. Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1563, 19 USPQ2d 1111, 1116 (Fed. Cir. 1991). This written description requirement serves to ensure that the inventor had "possession", as of the filing date of the application relied on, of the specific subject matter later claimed. In re Wertheim, 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976). No literal description is needed to support "possession". Eiselstein v. Frank, 52 F.3d 1035, 1038, 34 USPQ2d 1467, 1470 (Fed. Cir. 1995). Rather, the original disclosure only needs to reasonably convey to those skilled in the art, as of the filing date, the invention now claimed. Vas-Cath, 935 F.2d at 1563-64, 19 USPQ2d at 1117; In re Kaslow, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983). It is, therefore, incumbent upon the examiner to supply the factual basis to establish that the original disclosure not only does not provide literal support for the invention now claimed, but also does not reasonably convey to one of ordinary skill in the art, as of the filing date, the invention now claimed. See In re Alton, 76 F.3d 1168, 1174-75, 37 USPQ2d 1578, 1583

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(Fed. Cir. 1996) citing In re Wertheim, 541 F.2d at 264, 191 USPQ at 98.

The examiner rejected claims 1 through 12 under 35 U.S.C. § 112, first paragraph, as lacking descriptive support for the invention now claimed in the original disclosure. The examiner stated that "the limitations added to the claims by the amendment of February 5, 1993 are not supported by the specification." See Answer, page 2. The limitations referred to were added to claims 1, 2, 4, 6 and 8 through 12. See the amendment dated February 5, 1993, Paper No. 3. The examiner, however, did not discuss all "the limitations added to the claims by the amendment". See the entire Answer. Rather, the examiner discussed only two specific claim limitations added in claims 1 and 2 in the "Ground of [R]ejection" section of the Answer (see pages 2 and 3) and certain other limitations in the "Response to [A]rgument" section of the Answer (see pages 5 through 7). We will address the limitations added in claims 1 and 3 through 12 separately from the limitations added in claim 2.

The examiner initially stated that:

For example, in the amendment of claim 1, the phrases, "photolithographic process using light from a partially coherent lens", and the language added at lines 16-27, are not supported by the specification.

In response, appellants argued that such limitations and other limitations in claims 1 and 3 through 12 were reasonably conveyed by the original disclosure. See Brief, pages 11-22. In support of their position, appellants referred to certain descriptions in the original disclosure. Id. However, the examiner did not explain why each and every description referred to by appellants did not reasonably convey the claim limitations in question. See the entire Answer. Rather, the examiner made conclusory statements and improperly shifted the burden to appellants. Id. As aptly stated in Ex parte Sorenson, 3 USPQ2d 1462, 1463 (Bd. Pat. App. & Intf. 1987), "the only reasoning presented which we can discern is an example of ipse dixit reasoning, resting on a bare assertion by the examiner." Procedurally, the examiner simply has not met his initial burden of establishing a prima facie case of unpatentability. Accordingly, we are constrained to reverse the rejection of claims 1 and 3 through 12.

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The rejection of claim 2 under § 112, first paragraph, however, is on a different footing. The examiner stated that:

In amended claim 2, N is defined as "the numerical lens aperture value". However, at page 9 (line 15) of the specification, N is defined as the value of the refractive index. The examiner has no knowledge that these two variables, "refractive index" and "lens aperture" are the same.

In other words, the formula now claimed not only lacks literal support, but is not reasonably conveyed in the original disclosure. Since appellants do not dispute the examiner's conclusion and finding, see Brief, page 26, we will affirm the rejection of claim 2.

In reaching this conclusion, we note appellants' inadvertent error argument based on the apparent difference between the designations of "N" in the now claimed and the originally disclosed formulas. See Brief, pages 26 and 27. However, we are not persuaded because, by definition, all new limitations violating the § 112 description requirement are different from those originally disclosed. There simply is no evidence that one of ordinary skill in the art would have read the now claimed formula as the one originally disclosed.

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REJECTION BASED ON 35 U.S.C. § 112, SECOND PARAGRAPH

The examiner rejected claims 1 through 12 under 35 U.S.C. § 112, second paragraph, as being indefinite. The examiner initially urged that certain phrases in claim 1 are indefinite. See Answer, pages 3 and 4. In so urging, the examiner either misread the phrases or did not apply the appropriate standard. Compare Answer, pages 3 and 4 with claim 1. Note that the definiteness of the claim language employed must not be analyzed in a vacuum, but always in light of the teachings of the prior art and of the particular application

disclosure as it would be interpreted by one having ordinary skill in the art. In re Kroekel, 504 F.2d 1143, 1146, 183 USPQ 610, 612 (CCPA 1974); In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238-39 (CCPA 1972).

The examiner also improperly urged that having no antecedent for the particular words in question renders the claims per se indefinite. See Answer, pages 3 and 8. The effect of no antecedent basis for the particular words in claims, however, is dependent on the facts of each case. For lacking antecedent basis to render claims vague, one of ordinary skill in the art must not be able to ascertain the metes and bounds of the claimed subject matter, even when it is viewed in light of the teachings of the prior art and the supporting specification. In re Kroekel, supra; In re Moore, supra. However, the examiner, on this record, does not allege, much less explain, why having no antecedent for the particular words in question would have rendered the metes and bounds of the subject matter of claims 1 through 12 unascertainable by one of ordinary skill in the art.

In view of the foregoing, we are constrained to reverse the examiner's rejection of claims 1 through 12 procedurally.

ANCILLARY REQUEST

As a final point, we note that appellants have requested the Board to direct the examiner for reconsideration and entry of the amendments filed after final rejection. See Brief, page 3. However, an examiner's refusal to enter the amendments filed after final rejection is petitionable to the Commissioner and not appealable to this Board. See In re Hengehold, 440 F.2d 1395, 1403, 169 USPQ 473, 479 (CCPA 1971); MPEP Chapter 1000.

CONCLUSION

In summary, we conclude that:

- (1) The rejection of claims 1 and 3 through 12 under 35 U.S.C. § 112, first paragraph, is reversed;
- (2) The rejection of claim 2 under 35 U.S.C. § 112, first paragraph, is affirmed; and
- (2) The rejection of claims 1 through 12 under 35 U.S.C. § 112, second paragraph, is reversed.

The decision of the examiner is affirmed-in-part.

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No time period for taking any subsequent action in
connection with this appeal may be extended under 37 CFR
§ 1.136(a).

AFFIRMED-IN-PART

	EDWARD J. KIMLIN)	
	Administrative Patent Judge)	
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	CHUNG K. PAK)	BOARD OF
PATENT	Administrative Patent Judge)	APPEALS
)	AND
)	
INTERFERENCES)	
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